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इस भाग में विशेष पृष्ठ संख्या दी जाती हैं जिससे कि यह अलग संकलन के रूप में रखा जा सके।

Separate paging is given to this Part in order that it may be filed
as a separate compilation

MINISTRY OF COMMERCE

NOTIFICATION

New Delhi, the 14th February 1966

S.O. 495.—Whereas the Central Government is of opinion that in exercise of the powers conferred by section 6 of the Export (Quality Control and Inspection) Act, 1963 (22 of 1963), the rubber hoses mentioned in Annexure I to this notification shall be subject to inspection prior to export;

And whereas the Central Government has formulated the proposals specified below for the said purpose and has forwarded the same to the Export Inspection Council as required by sub-rule (2) of rule 11 of the Export (Quality Control and Inspection) Rules, 1964;

Now, therefore, in pursuance of the said sub-rule, the Central Government publishes the said proposals for the information of the public likely to be affected thereby.

2. Notice is hereby given that any person desiring to forward any objection or suggestion with respect to the said proposals may forward the same within thirty days of the date of publication of this notification to the Export Inspection Council, World Trade Centre, 14/1-B, Ezra Street, 7th flour, Calcutta-1.

Proposals

- (1) To notify that the rubber hoses shall be subject to inspection prior to export;
- (2) To specify the type of inspection in accordance with the Export of Rubber Hoses (Inspection) Rules, 1966, as the type of inspection which would be applied to rubber hoses prior to their export;
- (3) To recognise the specifications as set out in Annexure II to this notification as the standard specifications for the rubber hoses;
- (4) To prohibit the export, in the course of international trade, of any rubber hose, unless the same is accompanied by a certificate issued by an inspection agency recognised for the purpose under section 7 of the Export (Quality Control & Inspection) Act, 1963 (22 of 1963), to the effect that the rubber hose is export-worthy.

3. Nothing in this notification shall apply to the export of samples of rubber hoses to prospective buyers.

4. In this notification, 'rubber hose' shall mean any of the rubber hoses mentioned in Annexure I to this notification, made from compounded vulcanized rubber reinforced with woven fabric or braids of cotton, synthetic yarns and wires over the rubber lining and used for the purpose of discharge or suction of all types of fluids under high or low pressure.

ANNEXURE I

1. Water Delivery Hose (Woven Reinforcement).
2. Water Delivery Hose (Braided).
3. Water Suction Hose.
4. Steam Hose.
5. Air Hose.
6. Oil Resisting Hose.
7. Chemical Hose (excluding organic liquid solvents).
8. Welding Hose.
9. Pneumatic Tool Hose.
10. Sand Blast Hose.
11. Spray Hose.
12. Radiator Hose.
13. Railway Vacuum Brake Hose.
14. Railway Water Feed Hose.

ANNEXURE II

1. *Specifications for Water Delivery Hoses (Woven Reinforcement)*

- (1) The dimensions of rubber hoses shall be as agreed to between the buyer and seller.
- (2) The rubber hoses shall be tested for the characteristics conforming to the requirements as specified below:

Characteristics	Requirements for			
	Low Pressure		High Pressure	
	Lining	Cover	Lining	Cover
Tensile Strength kg/Sq. cm. (minimum)	.	40	40	70
at break, per cent (minimum)	.	200	200	250
				052

Requirements for

Low Pressure High Pressure

Kg.

Kg.

(c) Adhesion:—(Separation shall not exceed 25 mm/minimum under the following specified load):

(i) Between fabric plies	3.5	4.5
(ii) Between lining and fabric	3.0	4.0
(iii) Between Cover and fabric	3.0	4.0

(d) Bursting Pressure : (Kg./Sq. Cm.) (Minimum):

Internal Diameter Low Pressure High Pressure

12.5 mm	10	85
16.0 "	10	70
20.0 "	10	70
25.0 "	10	..
31.5 "	10	..
38.5 "	10	..

(3) Each length of rubber hoses shall be indelibly marked adjacent to each end with the manufacturer's name or trade mark, if any, hose denominations, month and year of manufacture.

2. Specifications for Water Delivery Hoses (Braided)

(1) The dimensions of rubber hoses shall be as agreed to between the buyer and seller.

(2) The rubber hoses shall be tested for the characteristics conforming to the requirements as specified below:

Characteristics

Requirements for

Low Pressure High Pressure

Lining Cover Lining Cover

(a) Tensile strength Kg/Sq.Cm. (Minimum) 40 40 70 70

(b) Elongation at break, percent (Minimum) 200 200 250 250

(c) Adhesion (Separation shall not exceed 25 mm/ min under the following specified load).

Low Pressure High Pressure

Kg. Kg.

(a) Between fabric and plies 4.5 4.5

(b) Between Lining and fabric 4.5 4.5

(c) Between Cover and fabric 4.5 4.5

Bursting Pressure (Kg./Sq. Cm.) (Minimum)

Internal diameter Low Pressure type High Pressure type

10 mm.	14	85
12.5 mm.	14	85
16 mm.	14	70
20 mm.	14	70
25.5 mm.	14	50
31.5 mm.	14	40
38 mm.	14	35

(3) Each length of rubber hoses shall be indelibly marked adjacent to each end with the manufacturer's name or trade mark, if any, hose denominations, month and year of manufacture.

3. Specifications of Water Suction Hose

The characteristics will be in accordance with the buyer's specifications.

4. Specifications for Steam Hoses

Steam Hoses are classified in two types:—

- (a) Low Pressure type—Where steam pressures upto and including 2.5 kg./sq.cm.
- (b) High Pressure type—Where steam pressure between 2.5 kg./sq.cm. 5 kg./sq.cm.

(1) The dimensions of rubber hoses shall be as agreed to between the buyer and seller.

(2) The rubber hoses shall be tested for the characteristics conforming to the requirements as specified below:

Characteristics	Unit	Requirements for			
		Low Pressure		High Pressure	
		Lining	Cover	Lining	Cover
(a) Tensile strength Minimum	Kg./sq. cm.	70	70	85	85
(b) Elongation at break minimum	per cent	200	300	200	330

(c) Adhesion:

The adhesion shall be such that the rate of separation shall not exceed 25 mm/minute under the following specified loads.

	Low Pressure		High Pressure	
	Kg.	Kg.	Kg.	Kg.
Between lining and fabric		4.5		5.5
Between fabric plies		5.5		6.5
Between fabric and cover		4.5		5.5

(d) Hydraulic test:

This is to be carried on a piece of 100 cm. long and the minimum bursting pressure will be as follows:

Low Pressure	20 kg./sq. cm.
High Pressure	55 kg./sq. cm.

(3) Each length of rubber hoses shall be indelibly marked adjacent to each end with the manufacturer's name or trade mark, if any, hose denominations, month and year of manufacture.

5. Specification for Air Hose of Rubber

(1) The Dimensions of rubber hoses shall be as agreed to between the buyer and seller.

(2) The rubber hoses shall be tested for the characteristics conforming to the requirements as specified below:

Characteristics	Unit	Requirements for			
		Light Duty		Heavy duty	
		Lining	Cover	Lining	Cover
(a) Tensile strength (Minimum)	Kg/sq. cm.	40	40	70	105
(b) Elongation at break (Minimum)	Per cent	250	200	300	350

(c) Adhesion:

The adhesion shall be such that the rate of separation does not exceed 25 mm/minute under a load of 4.5 kg. for the following:

- (a) Between braids
- (b) Between lining and braid
- (c) Between cover and braid

(d) Bursting Pressure (Kg/sq. cm.) (Minimum):

Internal diameter mm	for Light Duty	for Heavy Duty	Bursting pressure
			kg/sq. cm (Minimum)
5	28
6.30	28
8.00	28
10.00	28
12.50	28	55	..
16.00	28	50	..
20.00	28	45	..
25.00	28	45	..
31.05	35	35	..
38.00	30	30	..
50.00	28	28	..

(3) Each length of rubber hoses shall be indelibly marked adjacent to each end with the manufacturer's name or trade mark, if any, hose denominations, month and year of manufacture.

6. Specifications for Oil Resisting Hoses

(1) The dimensions of Oil Resisting Hoses shall be as agreed to between the buyer and seller.

(2) The Oil Resisting Hoses shall be tested for the characteristics conforming to the requirements as specified below:

Characteristics	Unit	Requirements for	
		Lining	Cover
(a) Tensile strength (Minimum)	Kg/sq. Cm.	60	55
(b) Elongation at break (Minimum)	Per cent	300	250

(c) *Adhesion:*

The adhesion shall be such that the rate of separation does not exceed 25 mm/minute under the following loads:

- (a) Between fabric plies 4.5 Kg.
- (b) Between lining and fabric 3.6 Kg.
- (c) Between Cover and fabric 3.6 Kg.

(d) *Bursting Pressure:*

A sample of hoses of 60 cm long when tested shall show a bursting pressure of not less than 20 kg/sq. cm.

(e) *Oil Absorption:*

When tested by immersing the test piece in specified oil under specified conditions the increase in weight of the lining and cover due to oil absorption shall be not more than 30 per cent and in each case the rubber shall be free from cracks and undue tackiness. As a result of the test the colour of the oil shall not be affected.

(3) Each length of oil resisting hoses shall be indelibly marked adjacent to each end with the manufacturer's name or trade mark, if any, hose denominations, month and year of manufacture.

7. *Specifications for Chemical Hoses*

(Excluding organic liquid solvents)

The hose must consist of:

- (a) an inner rubber tube or lining resistant to the liquid for which the hose is to be used;
- (b) reinforcement plies of woven fabric;
- (c) an outer rubber cover.

(1) The dimensions of Chemical hoses (excluding organic liquid solvents) shall be as agreed to between the buyer and seller.

(2) The chemical hoses shall be tested for the characteristics conforming to the requirements as specified below:

Characteristics	Unit	Requirements for	
		Lining	Cover
(a) Tensile strength (Minimum)	kg/sq.cm.	105	105
(b) Elongation at break (Minimum)	Per cent	400	400

(c) *Adhesion:*

The adhesion shall be such that the rate of separation shall not exceed 25 mm/minute under the following loads:

- (a) Between lining and fabric 4.5 Kg.
- (b) Between fabric plies 5.4 Kg.
- (c) Between abric and cover 4.5 Kg.

(d) *Bursting Pressure:*

Internal Diameter mm	Bursting Pressure kg/sq.cm. (Minimum)	Internal Diameter mm	Bursting Pressure kg/sq.cm. (Minimum)
12.5	38.5	31	28
16	35.0	38	25
20	28.0	45	20
25	32.0	50	20

(3) Each length of oil resisting hoses shall be indelibly marked adjacent to each end with the manufacturer's name or trade mark, if any, hose denominations, month and year of manufacture.

8. *Specification for Welding Hose of Rubber*

(1) The dimensions of Welding hoses of rubber shall be as agreed to between the buyer and seller.

(2) The welding hoses shall be tested for the characteristics conforming to the requirements as specified below:

Characteristics	Requirements for		
	Lining	Cover	
a) Tensile strength (Minimum)	kg/sq.cm.	55	70
b) Elongation at break (Minimum)	percent	250	300

(c) *Adhesion:*

The adhesion shall be such that the rate of separation does not exceed 25 mm/minute for the following under the specified load.

- (a) Between fabric plies 4.5 Kg.
- (b) Between Lining and fabric 4 kg.
- (c) Between Cover and fabric 4 Kg.

(d) *Bursting Pressure:*

Internal Diameter mm.	Bursting Pressure Kg/Sq. cm. (Min- imum)
5.0	50
6.3	50
8.0	50
10.0	50
12.5	50

(3) Each length of welding hoses of rubber shall be indelibly marked adjacent to each end with the manufacturer's name or trade mark, if any, hose denominations, month and year of manufacture.

9. *Specifications for Pneumatic Tool Hoses*

(1) The dimensions of Pneumatic Tool Hoses shall be as agreed to between the buyer and seller.

(2) The Pneumatic Tool Hoses shall be tested for the characteristics conforming to the requirements as specified below:

Characteristics	Unit	Requirements for	
		Lining	Cover
(a) Tensile strength (Minimum)	Kg./sq. Cm.	84	84
(b) Elongation at break (Minimum)	Percent	300	300

(c) *Adhesion test:*

The adhesion shall be such that the rate of separation does not exceed 25 mm. per minute under the following loads:

- (a) Between fabric plies 4.5 Kg.
- (b) Between lining & fabric 3.6 Kg.
- (c) Between cover & fabric 3.6 Kg.

(d) *Bursting Pressure:*

Internal diameter in mm.	Minimum bursting pressure in Kg. per sq. cm.
10.0	49.0
12.5	56.0
16.0	56.0
20.0	49.0
25.0	45.5
31.5	42.0
38.0	38.5

(3) Each length of pneumatic tool hoses shall be indelibly marked adjacent to each end with the manufacturer's name or trade mark, if any, hose denominations, month and year of manufacture.

10. *Specifications for Sand Blast Hoses*

(1) The dimensions of Sand Blast Hoses shall be as agreed to between the buyer and seller.

(2) The sand blast hoses shall be tested for the characteristics conforming to the requirements as specified below:

Characteristics	Unit	Requirements for	
		Lining	Cover
(a) Tensile strength (Minimum)	Kg./sq. Cm.	120	120
(b) Elongation at break (Minimum)	Percent	400	400

(c) *Adhesion:*

The adhesion shall be such that the rate of separation does not exceed 25 mm/minute under the following loads:

- (a) Between lining and fabric 5.5 Kg.
- (b) Between fabric Plies 5.5 Kg.
- (c) Between fabric and cover 5.5 Kg.

(d) *Bursting Pressure:*

The bursting pressure of the hose will be as follows:—

Internal Diameter mm.	Bursting Pressure Kg/sq. in. (Min- imum)	Internal Diameter mm	Bursting Pressure Kg/sq. in (Min- imum)
12.5	38.5	31	28
16 mm.	35	38	25
20 mm.	28	45	20
25 mm.	32	50	20

(3) Each length of sand blast hoses shall be indelibly marked adjacent to each end with the manufacturer's name or trade mark, if any, hose denominations, month and year of manufacture.

11. *Specification for Spray Hoses*

(1) The dimensions of Spray Hoses shall be as agreed to between the buyer and seller.

(2) The spray hoses shall be tested for the characteristics conforming to the requirements as specified below:—

Characteristics	Unit	Requirements for	
		Lining	Cover
(a) Tensile strength (Minimum)	Kg/sq. Cm.	70	70
(b) Elongation at break (Minimum)	Percent	300	300

(c) *Adhesion:*

The adhesion shall be such that the rate of separation does not exceed 25 mm. per minute under a load of 6.0 lgs. for the following:—

- (a) Between lining and braid
- (b) Between braids, and
- (c) Between cover and braid.

(d) *Bursting Pressure:*

Internal diameter mm.	Bursting Pressure Kg/sq. cm. (Min- imum).
10	120
12.5	120

(3) Each length of spray hoses shall be indelibly marked adjacent to each end with the manufacturer's name or trade mark, if any, hose denominations, month and year of manufacture.

12. *Specifications Radiator Hoses*

(1) The dimensions of Radiator Hoses shall be as agreed to between the buyer and seller.

(2) The radiator hoses shall be tested for the characteristics conforming to the requirements as specified below:—

Characteristics	Unit	Requirements for	
		Lining	Cover
(a) Tensile strength (Minimum)	Kg./sq. Cm.	55	55
(b) Elongation at break (Minimum)	Percent	250	250

(c) *Adhesion:*

The adhesion shall be such that the rate of separation does not exceed 25 mm per minute under the following loads.

- (a) Between lining and fabric or lining and braid 3.5 Kg.
- (b) Between fabric plies or braids 4.5 Kg.
- (c) Between cover and fabric or cover and braid 3.5 Kg.

(d) *Bursting Pressure:*

Internal Diameter mm.	Minimum Pressure	Bursting kg./sq. cm.
10		33
12.5		30
16.0		25
20.0		22
25.0		17
31.5		15
38.0		14
45.0		12
50.0		10
56.0		8
63.0		7
70.0		6
75.0		5

(e) *Resistance to Ethylene glycol:*

(a) The resistance of the lining to Ethylene glycol shall be such that the sample shall show no sign of separation of the lining and fabric or braided yarn and it shall not develop any cracks or tackiness or be in such a condition that it may be readily disintegrated.

(f) *Resistance to Mineral Oil:*

(b) The test specimen shall satisfy the following requirements after immersion in mineral oil and testing.

Maximum change in elongation at break 30 percent of the original value.

Maximum change in tensile strength 30 percent of the original value.

(3) Each length of radiator hoses shall be indelibly marked adjacent to each end with the manufacturer's name or trade mark, if any, hose denominations, month and year of manufacture.

13. Specification for Vacuum Brake Hose for Railway fittings

(1) The dimensions of Vacuum Brake Hoses shall be as agreed to between the buyer and seller.

(2) The Vacuum Brake hoses shall be tested for the characteristics conforming to the requirements as specified below.

(a) The minimum requirements for the duck used in the hoses would be as follows:

		Minimum strength/cm. width in standard condition.
	Warp (kg.)	Weft (kg.)
Inner hose duck	14.00	14.00
Intermediate hose duck	18.00	18.00
Cover duck	20.5	20.5

(b) Physical Test:

Hoses shall be bent by hand to the undernoted degrees without displacement of the wire core or rupture of the canvas covering. The bending should be done once in the one direction and then in the opposite direction.

mm

685 x 51	Bend till ends touch
560 x 51	Bend till ends are 102 mm. apart.
455 x 51	Bend till ends are parallel.

(c) Vacuum Retaining Capacity Test:

The hoses shall be connected by means of a cylindrical nozzle of 60.3 mm (2 3/8 inch) diameter and not less than 44 mm (1 3/4 inch) in length to chamber of 1963 cu cm (100 cubic inches) volume with the free end closed with a cylindrical plug, identical in external dimensions with the nozzle, and with 508 mm (20 inches) of vacuum throughout the assembly, shall not, on isolation from the sources of vacuum, record a drop of more than 76 mm (3 inches) in one hour on the chamber gauge. The hoses shall not be clipped or otherwise bound to the chamber nozzle or plug for this test.

(d) Contraction Test:

Hoses when subjected to 508 mm (20 inches) of vacuum shall contract not more than 5 per cent of their original length when at rest.

(3) Each length of Vacuum Brake Hoses shall be indelibly marked, adjacent to each end with the manufacturer's name or trade mark, if any, hose denominations month and year of manufacture.

14. Specifications for Feed Pipes (Hoses) for Locomotives

(1) The dimensions of Feed Pipes (Hoses) for Locomotives shall be as agreed to between the buyer and seller.

(2) The Feed Pipes (Hoses) shall be tested for the characteristics conforming to the requirements as specified below:—

(a) Bend Test:

The hoses shall be bent by hand under the following noted degrees without displacement of the wire core or damage of the canvas covering.

635 mm x 51 mm—Till the ends are parallel.

(b) Adhesion:

The adhesion shall be such that the separation shall not exceed 25 mm per minute under a load of 3.6 kg. between:

- (i) fabric and fabric,
- (ii) fabric and cover.

(c) Hydraulic Test:

The hoses shall be subjected to an internal water pressure test of 7 kg/sq. cm. for 5 minutes without showing any leakage and rupture.

(3) Each length of feed pipes (hoses) shall be indelibly marked adjacent to each end with the manufacturer's name or trade mark, if any, hose denominations, month and year of manufacture.

[No. 60(127)Exp.Insp/65.]

A. C. BANERJEE, Jt. Secy.